

Notice of Allowability

Application No.

10/723,397

Examiner

NANCY BITAR

Applicant(s)

LEE ET AL.

Art Unit

2624

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/18/2008.
2. ☒ The allowed claim(s) is/are 1, 11, 14, 17, 20, 23 (now renumbered 1-6).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20080916.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

/Nancy Bitar/
Examiner, Art Unit 2624

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Shih-Jong Lee on 9/16/2008.

The application has been amended as follows:

Claim 1(Amended): please insert –output-- in step e) line 5 before “around” and after “result”high precision match result output around a pixel.

Claim 14(Amended): please insert –output-- in step e) line 5 before “around” and after “result”high precision match result output around a pixel.

Claim 17(Amended): please insert –output-- in step d) line 8 before “around” and after “result”high precision match result output around a pixel.

Claim 20(Amended): please insert –output-- in step e) line 5 before “around” and after “result”high precision match result output around a pixel.

Allowable Subject Matter

2. Claims 1,11,14,17,20,23 are allowed (now renumbered (1-6))
3. The following is an examiner's statement of reasons for allowance: After reviewing the remarks made by the applicant in response to the non-final action. The Examiner finds the remarks to be persuasive .the most pertinent prior art is Kurasawa et al (US 4,972,499) and Silver et al (US 7,164,796).

Kurasawa et al teaches a pattern recognition apparatus having a contour segmentation unit for dividing an input pattern into segments, a characteristic extraction unit for extracting characteristics of the input segments, and a reference unit for storing characteristic data of reference patterns. The reference unit includes a main reference and a detailed matching reference. The main reference stores partial pattern characteristic data representing the characteristics of segments of each reference pattern. The detailed matching reference stores detailed characteristic data of each reference pattern together with a program for specifying an operation procedures. A matching processor sequentially compares and collates the input pattern with the reference patterns to find out that standard pattern with which the input pattern is matched with the highest similarity. When the input pattern is matched with several reference patterns, a detailed recognition unit performs a detailed recognition process using the detailed characteristic data of these reference patterns to select the reference pattern. Silver teaches invariant matching by generating a vector-valued function using the pattern features to provide a

pattern field; extracting image features from the object image; evaluating each image feature, using the pattern field and an n-dimensional transformation that associates image features with pattern features, so as to determine at least one associated feature characteristic. The invention provides pattern inspection that is faster and more accurate than any known prior art method by using a stored pattern that represents an ideal example of the object to be found and inspected, and that can be translated, rotated, and scaled to arbitrary precision much faster than digital image re-sampling, and without pixel grid quantization errors. None teaches matching function values at discrete (x,y) positions create a high precision match result output without image matching wherein the high precision match result around a pixel position (x,y) is the sub pixel values and other parameters correspond to the maximum value of the high precision matching function. The Examiner finds no reason or motivation to combine the above references in an obviousness rejection thus placing the application in condition for allowance.

Any comments considered necessary by applicant must be submitted on later than the payment of the issue fee and to avoid processing delays should preferably accompany the issue fee. Such submissions should be clearly labeled, comments on statement of reasons for allowance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NANCY BITAR whose telephone number is (571)270-1041. The examiner can normally be reached on Mon-Fri (7:30a.m. to 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nancy Bitar

9/15/2008

/Samir A. Ahmed/

Supervisory Patent Examiner, Art Unit 2624